

Portable CD-ROM Drive

Operating Instructions

CD-ROM **Discman** 

PRD-650WN

Specifications

Environment

Operating Temperature	5°C to 35°C (41°F to 95°F)
Humidity	10% to 80%
Atmosphere	Noncondensing

Laser Diode Properties

Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser Output	Less than 44.6 μ W

* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

Dimensions and Mass

Dimensions	Approx. 132.3 x 27.0 x 171.5 mm (w/h/d) (5 $\frac{1}{4}$ x 1 $\frac{1}{8}$ x 6 $\frac{7}{8}$ inches)
Mass	Approx. 291 g (10 oz)

Power Requirement

- DC IN 6V jack accepts the Sony AC power adaptor.
- 3.6V DC Rechargeable battery pack LIP-12(H)
- 6V DC four size AA (LR6) alkaline batteries

This unit uses CD-ROM discs with the following mark.



When you use this unit as a CD player, use compact disc with the following mark.



CAUTION - The use of optical instruments with this product will increase eye hazard.

For the customers in the USA and Canada

**DISPOSAL OF LITHIUM ION BATTERY
LITHIUM ION BATTERY
DISPOSE OF PROPERLY.**

You can return your unwanted lithium ion batteries to your nearest Sony Service Center or Factory Service Center.

Note: In some areas the disposal of lithium ion batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you call 1-800-222-SONY (United States only)
For the Sony Factory Service Center nearest you call 416-499-SONY (Canada only)

Caution: Do not handle damaged or leaking lithium ion battery.

Pour les utilisateurs aux Etats-Unis et au Canada

**DEPOT DES BATTERIES AU LITHIUM IONISE
DEPOSEZ LES BATTERIES AU LITHIUM IONISE AUX ENDROITS
RECOMMEDES.**

Vous pouvez rapporter les batteries au lithium ionisé dans un centre de Service Sony ou dans un point de ramassage.

Remarque: Dans certain pays, il est interdit de jeter les batteries au lithium ionisé avec les ordures ménagères ou dans les poubelles de bureau.

Pour connaître le centre de Service Sony le plus proche de chez vous, composez le 1-800-222-SONY (Etats-Unis uniquement)

Pour connaître le point de ramassage le plus proche de chez vous, composez le 416-499-SONY (Canada uniquement)

Avertissement: Ne pas utiliser des batteries au lithium ionisé qui sont endommagées ou qui fuient

When using as an Audio CD player

Problem	Cause/Solution
The disc does not start.	<ul style="list-style-type: none">• The disc is inserted upside down or incorrectly. → Insert the disc correctly with the label facing up.• The disc is defective. → Replace with a good one.• The lens or the disc is dirty. → Clean the lens or the disc.• Condensation occurs. → Leave the unit in a warm place until the condensation disappears.• The RESUME/HOLD switch is set to HOLD. → Set the switch to RESUME ON or RESUME OFF.• The battery level is low. → Replace the alkaline batteries or recharge the rechargeable battery.• The unit is still connected to the interface cable. → Remove the interface cable.
You hear nothing from the headphones.	<ul style="list-style-type: none">• The headphones are not connected correctly. → Plug the headphones into the PHONES jack.• The volume is too low. → Use the VOL control to increase the volume.• The headphones plug is dirty. → Clean the plug.

For the installation procedure

The INSTALL.TXT file in the supplied floppy disk contains detailed information about the software installation procedure. Please refer to this file if the software cannot be installed correctly.

If the problem still persists, consult your nearest Sony dealer or call technical support center for assistance.

Trademarks

- Adaptec is a registered trademark of Adaptec Inc.
- EZ-SCSI is a trademark of Adaptec Inc.
- Microsoft®, MS-DOS®, Windows® and Windows® 95 are registered trademarks of Microsoft Corporation.
- PC DOS and PC/AT are registered trademarks of International Business Machines Corporation.
- 386SX™ is a trademark of Intel Corporation.
- Photo CD is a trademark of Eastman Kodak Company.

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Features

CD-ROM Discman connects to the PCMCIA slot of your PC and functions as an external CD-ROM drive. It comes with the following features:

- supports CD-ROM, CD Extra (CD+), and Photo CD (multisession).
- 6x speed, 900 KByte/sec data transfer rate (when the drive operates on AC power)
- 280 ms disc access time (average)
- can be used as an audio CD player

System requirements (not supplied)

- PC/AT® compatible personal computer with 386SX™ or higher processor
- 4MB or more RAM (8MB recommended) (Windows)
- 2MB or more RAM (DOS)
- PCMCIA™ 2.1 Type II slot
- PCMCIA Card and Socket Services 2.1 or higher (Windows 3.1 and DOS)
- MS-DOS® or PC DOS 5.0 or higher
- Windows® 3.1 or Windows® 95
- A 3.5 inch high density floppy disk drive (to install the supplied software)

Troubleshooting

When using as CD-ROM drive

Problem	Cause/Solution
The drive does not operate properly.	<p><For Windows 95 and Windows 3.1/DOS users></p> <ul style="list-style-type: none">• The PC card is not inserted correctly.<ul style="list-style-type: none">→ Confirm that the PC card is inserted to the PC correctly.→ Confirm that the interface cable is connected to the CD-ROM drive and the PC card.• A CD-ROM disc is not inserted correctly.<ul style="list-style-type: none">→ Insert a disc with the label side up.• The cover is open. ("OPEn" appears on the display window.)<ul style="list-style-type: none">→ Close the cover correctly.• The battery is low. (⏻ appears on the display window.)<ul style="list-style-type: none">→ Replace the alkaline batteries with new ones.→ Charge the rechargeable battery.→ Use the AC power adaptor.• The CD-ROM disc is dirty.<ul style="list-style-type: none">→ Clean the disc (page 37).• The termination is set to OFF.<ul style="list-style-type: none">→ Set the termination to ON (page 18).• The operation mode is not correct.<ul style="list-style-type: none">→ Select the CD-ROM mode (page 32). <p><For Windows 95 users></p> <ul style="list-style-type: none">• The miniport driver is not installed correctly.<ul style="list-style-type: none">→ Double-click the System icon in the Control Panel folder and double-click [SCSI Controller] in the Device Manager window. Then select "Adaptec APA-1425/50/60 PCMCIA SCSI Host Adapter" and click [Remove]. Remove the PC card from your PC and insert it again. Proceed with the software installation (page 21). <p><For Windows 3.1/DOS users></p> <ul style="list-style-type: none">• The software is not installed correctly.<ul style="list-style-type: none">→ Install the software again by following the steps on pages 23 and 24.• The card service is not installed.<ul style="list-style-type: none">→ Install the necessary card service (page 5).• You did not insert the PC card to your PC and did not press ►II before starting your PC.<ul style="list-style-type: none">→ Insert the PC card to your PC, press to ►II turn on the CD-ROM drive, then restart your PC.

Precautions

On installation

Keep the unit away from high humidity, high temperature, mechanical vibration and direct sunlight.

On operation

- Use the unit on a sturdy, flat surface.
- Do not move the unit while it is operating. Doing so may cause a malfunction.
- Avoid exposing the unit to sudden changes in temperature. This may cause condensation to collect inside the unit. If the ambient temperature should suddenly rise while the unit is turned on, wait at least one hour before turning off the unit. If you attempt to operate the unit immediately after a sudden increase in temperature, a malfunction may occur during reading.

On transportation

- Save the packing materials as you may need to repack and transport the unit at a later date.
- Always remove the disc before moving the unit.

On the rechargeable lithium-ion battery (not supplied*)

*supplied with the models for the countries other than U.S.A.

- Keep the battery away from fire.
- Keep the battery dry.
- Do not open nor convert the battery.
- Do not expose the battery to any mechanical shock.

On the PCMCIA card

- Protect the card from static electricity. The components on the card can be destroyed by static electricity. Do not directly touch the I/O connector.
- Protect the card from mechanical shock.

The card consists of electronic components that have precise dimensions. Do not drop or bump the card.
- To remove the card, always press the release button on the PC to eject the card, then remove it completely. (Do not insert/remove the interface cable from the card while the card is inside the PCMCIA slot.)
- Do not touch the card with wet hands.
- Do not expose the card to water.

Listening in the Car

You can play audio CDs in the car, using the following accessories (not supplied).

- Car connecting pack CPA-9
- Car battery cord DCC-E260
- Car mount plate CPM-300P

Consult your dealer for detailed information on these accessories, and refer to their documentations for the setup.

When you turn off the engine

If your car has the switched ignition function built in, turning off the engine automatically turns off the unit, even if the unit has alkaline batteries or the rechargeable battery inside.

If the unit does not stop when you turn off the engine, you can do so by pressing ■ on the unit.

Caution

- Be sure to use a Sony car connecting pack for the connection, otherwise noise may result.
- Do not operate the system in a way that might divert your attention from driving safely. As a driver, you alone are responsible for safely operating your vehicle in accordance with traffic safety laws at all times.

Notes

- Do not put the unit on a dashboard.
- Do not leave the unit in a car parked in sunlight.

On power sources

- When you are not using the unit for a long time, disconnect all power sources from the unit.
- To unplug the AC power adaptor from the wall outlet, grasp the adaptor itself, do not pull its cord.

On the unit

- Keep the lens on the unit clean and do not touch it. If you do so, the lens may be damaged and the unit will not operate properly.
- Do not leave the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust or sand, moisture, rain, mechanical shock, or in a car with its windows closed.
- If the unit causes interference to the radio or television reception, turn off the unit or move it away from the radio or television.
- Do not wrap the unit in a cloth or blanket during use as it may cause malfunction or serious accidents.

Controlling playback

To pause	Press ► . (The play time will flash.)
To resume playback after pause	Press ► again.
To stop	Press ■.
To locate the beginning of the current selection (or previous selections) - AMS* function	Press ◀◀ once (or repeatedly).
To locate the beginning of the next selection (or following selections) - AMS* function	Press ▶▶ once (or repeatedly).
To move backward at high speed - search function	Keep ◀◀ pressed.
To move forward at high speed - search function	Keep ▶▶ pressed.

* AMS: Automatic Music Sensor

Notes

- While in the pause mode, pressing ◀◀ or ▶▶ will pause at the beginning of the located selection.
- The AMS function operates according to the playback mode in effect.

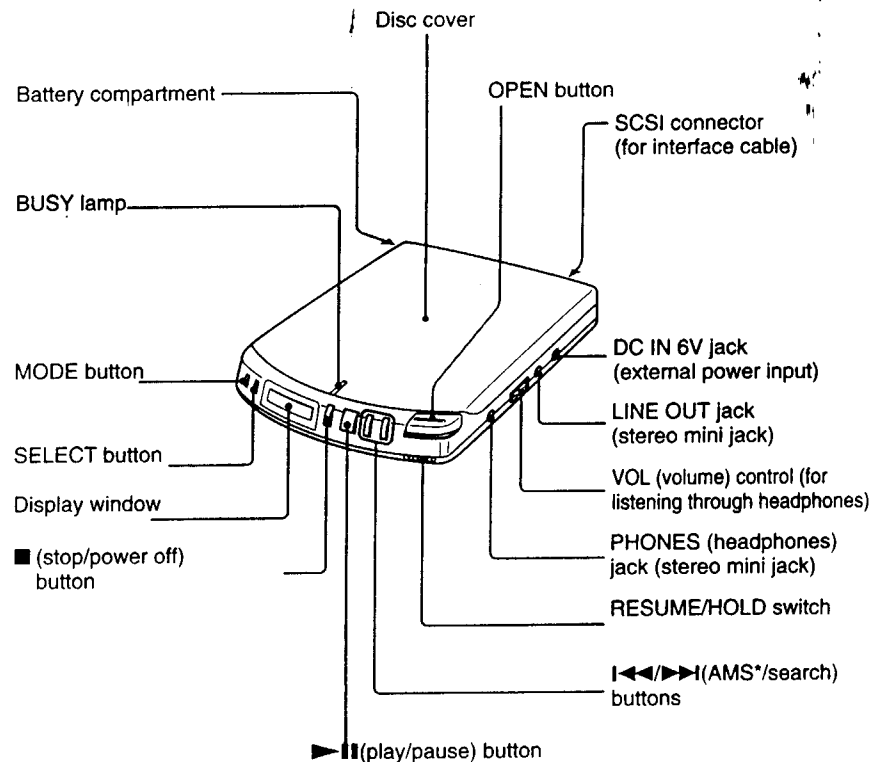
Locking the buttons

To prevent accidental pressing of the buttons, slide the RESUME/HOLD switch to HOLD to lock the buttons.

Starting from where you left off

When you are playing a CD, slide the RESUME/HOLD switch to RESUME ON before pressing ■ (stop/power off). When you want to listen to the disc again, press ►|| and the disc will resume at the same track number, minute and second where you left off. This feature, however, works only when power (AC, alkaline batteries or rechargeable battery) is supplied to the drive continuously and the disc cover stays closed.

Identifying the Parts



*AMS: Automatic Music Sensor

Changing the mode

To control playback of an audio CD with the buttons on the drive while the drive is connected to your PC, you need to change the mode of the drive.

1 Press ■ on the drive to turn it off.

If you are a Windows 95 user, remove the PC card from the PC card slot (page 28).

2 Insert an audio CD and press ►II on the drive to power it up.

If you are a Windows 95 user, insert the PC card into the PC card slot (page 19).

" CD" and "PC" indications start flashing.

(If you insert a CD-ROM disc, the drive will enter the CD-ROM mode automatically.)

3 Press MODE so that only " CD" flashes, and then press SELECT.

The drive enters the Discman mode.

If you press SELECT while "PC" flashes, the drive enters the CD-ROM mode. You can control playback of audio CDs from your PC.

For Windows 95 users

When the drive is in Discman mode, the drive will be turned off when you press ■ (stop/power off) or open the disc cover by pressing the OPEN button. When you change the discs, remove the PC card from the PC card once.

Enjoying various playback modes

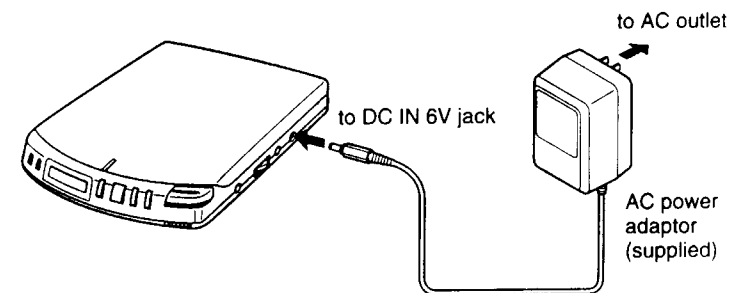
You can play a disc in the following playback modes:

Playback mode	Indication
Play all selections in sequence once	(no indication)
Play all selections in sequence repeatedly	↺
Play a single selection once	1
Play a single selection repeatedly	↺ 1
Play all selections in random order once	SHUF
Play all selections in random order repeatedly	↺ SHUF

Power Sources

Connecting to an AC outlet

Use the AC power adaptor (supplied) to connect the drive to an AC outlet, as illustrated.



Notes on the AC power adaptor

- The AC power adaptor may differ depending on the country of purchase.
- When the AC power adaptor is not used, unplug it from the AC outlet.
- Use only the AC power adaptor supplied. Do not use any other AC power adaptor.



Polarity of the plug

Notes on power source

- Besides AC power, the drive can also operate on alkaline batteries (not supplied) or on the rechargeable lithium-ion battery (not supplied*). See the "Using alkaline batteries" section (page 14) and the "Using the rechargeable lithium-ion battery" section (page 16) respectively for details.
- When the drive is connected to an AC outlet with the rechargeable battery installed in it, the drive will use the AC power as the power source to conserve battery.
- * The rechargeable lithium-ion battery is supplied with the models for the countries other than U.S.A.

The rotational speed of the drive differs as follows depending on the power source used.

On AC power : 6x speed
On alkaline batteries or rechargeable lithium-ion battery : 4x speed

Starting the program

Double-click the desired program-item icon.

Use Help for more information and operating instructions.

If you installed the software under DOS

You can control playback of audio CDs.

Start the program to control audio CD playback as follows:

1 Insert a CD into the CD-ROM drive.

2 Move to the directory where the supplied software is installed.

By default, the software is installed in the \SONYSC directory.

3 At the DOS prompt, type:
cdplayer

and press Enter.

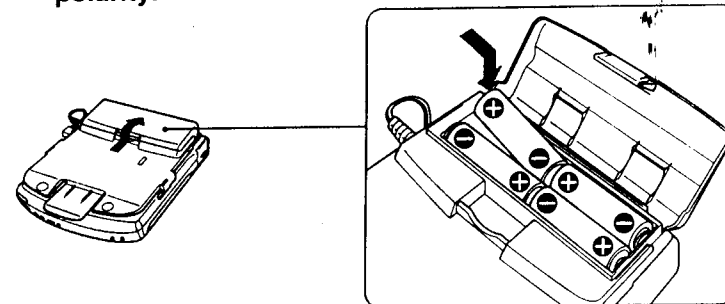
The total number of tracks on the CD and the total playback time are displayed.

4 Click the buttons on the screen or press the keys corresponding to the buttons to control playback.

For example, press (P) to start playback. Press (Q) to quit the program.

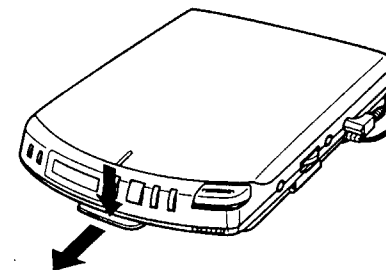
Refer to the README file for more information.

3 Insert the alkaline batteries with correct \oplus and \ominus polarity.



To remove the battery case

Press the indicated portion to unlock the battery case, then pull it toward you.



When appears

Replace the batteries with new ones, or the batteries will go dead and the drive will not operate.

Note on the battery case

When using the rechargeable lithium-ion battery, be sure to remove the battery case; otherwise the drive will operate only on the alkaline batteries in the battery case.

Notes on the alkaline batteries

- Be sure to insert the batteries in correct direction.
- The alkaline batteries are not rechargeable.
- Do not use a combination of new and old batteries.
- Do not use different types of batteries.
- The batteries slowly discharge while not in use.
- Do not use a battery that is leaking.
- If you are not using the CD-ROM drive for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- If a battery leaks, clean the battery case and replace all the batteries with new ones.

Ending

Close and exit your application software, then press ■ (stop/power off) on the drive.

Be sure to press ■ on the drive to turn off the power when the drive is not in use. Failure to do so will result in depletion of the battery power.

Note

If the RESUME/HOLD switch is set to the HOLD position, the ■ button will not operate.

Slide the switch to the RESUME OFF or RESUME ON position, then press the ■ button.

Removing the PC card

1 If you are Windows 95 user, proceed with the preparation described in the "For Windows 95 users only" section below.

2 Remove the PC card from your PC.

3 Disconnect the interface cable from the PC card.

Caution

Never disconnect the interface cable from the PC card while the PC card is inserted to your PC.

For Windows 95 users only

To remove PC card from your PC, proceed as follows; otherwise a trouble may occur.

1 Click the PC card icon to the right of the taskbar.



2 Click "Stop Adaptec APA-1460 SCSI Host Adapter."
"You may safely remove this device" message will be displayed.

3 Click "OK."
Now you can remove the PC card from your PC.

When ☞ appears

Recharge the battery again by plugging the drive into an AC outlet or the drive will not operate.

It will take about 3.5 hours at maximum for the battery to fully recharge*.

* Charging time required varies depending on how the rechargeable battery is used.

Battery life

If the battery can deliver, after a full charge, for only about half of its normal time, replace it with a new one.

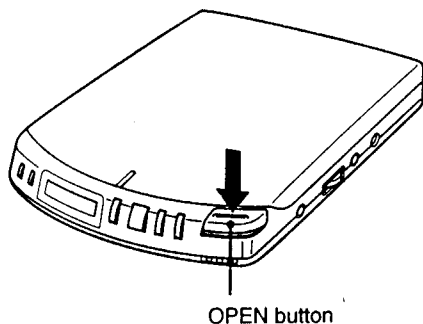
Notes on the rechargeable battery

- Before using the battery, charge it completely. (A brand-new battery is not charged.)
- Keep the battery in a cold place, and charge the battery at temperatures from 50°F to 86°F (from 10°C to 30°C). Lower temperatures require a longer charging time.
- If the battery can deliver, after a full charge, considerably less than normal, the battery may be used up. Replace the battery with a new one.
- You do not have to discharge it before recharging.
- If you charged the battery fully but you did not use it for a long time, it has been discharged. Then recharge the battery before use.

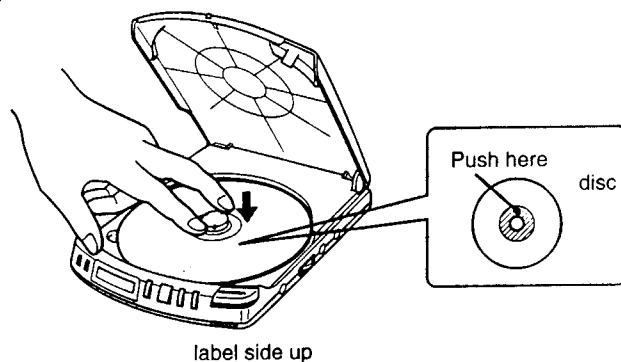
Inserting/Removing a Disc

Inserting a disc

- 1 Push the OPEN button to open the disc cover.

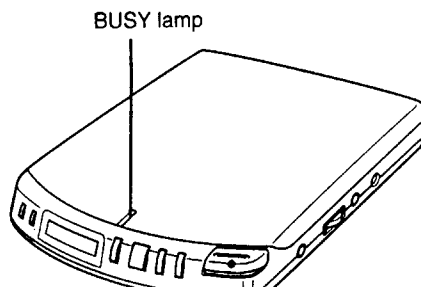


- 2 Insert a CD-ROM disc into the disc compartment. Push gently around the center of the disc until it clicks into place, being careful not to touch the lens.



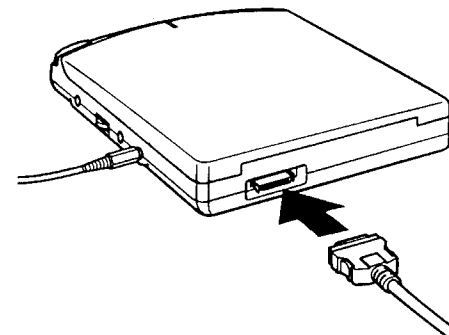
- 3 Close the cover. Now your PC is ready to read data on the CD-ROM disc.

When you start reading data on the CD-ROM disc, the BUSY lamp on the drive lights up.

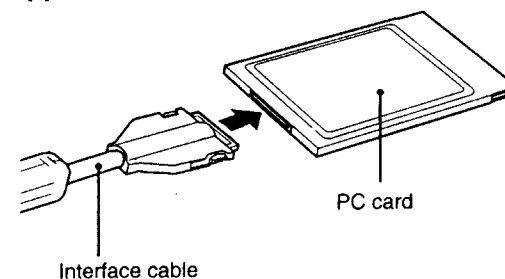


Putting the Parts Together

- 1 Insert the plug of the interface cable into the SCSI connector.



- 2 Make sure the shapes of the connectors of the interface cable and the PC card match. Insert the other end of the interface cable into the PC card supplied.



Before inserting the PC card to your PC, refer to the appropriate software installation guidelines.

Installing under DOS

- 1** Press ►II on the CD-ROM drive to turn the power on.
- 2** Insert the PC card into the PC card slot of your PC.
- 3** Insert the supplied floppy disk into the floppy disk drive (drive A) of your PC.
- 4** At the prompt, move to the floppy disk drive directory. Type:
a:
then press Enter.
- 5** At the DOS prompt, type:
dosinst
as appropriate, then press Enter.
- 6** Follow the instructions on the screen to complete installation.
- 7** Restart your PC.

Note

Be sure to restart your PC after completing installation.

For more details on installation, refer to the INSTALL.TXT file in the supplied floppy disk.

Installing under Windows 95

Caution

Do not run the installation program for Windows 3.1/DOS under Windows 95.

- 1** Before inserting the PC card into your PC, press ►II on the CD-ROM drive to turn the power on.
Remove the CD-ROM disc, if inserted into the drive.
- 2** Insert the PC card into the PC card slot of your PC.
"New Hardware Found" window appears.
- 3** Follow the instructions on the display of your PC to complete installation.

For details, refer to the followings:

If "New Hardware Found" window disappears
The software has already been installed.

If you are asked to select which driver you want to install
1 Select "Driver from disk provided by hardware manufacturer," then click [OK].

2 Insert the supplied floppy disk into the floppy disk drive, then click [OK].

If "Insert disk" window appears
Install the driver from Windows 95 CD-ROM, floppy disk, or supplied floppy disk.

For more details on installation, refer to the INSTALL.TXT file in the supplied floppy disk.

Before Installation

The PRD-650WN uses SCSI as the computer interface.
The EZ-SCSI by Adaptec Inc. is used to install the software.

Checking the Card and Socket Services on your PC

To install the supplied software, make sure the PCMCIA Card and Socket Services Release 2.1 have been installed onto your PC. Normally they are pre-installed onto a PC equipped with PC card slot(s). If you are not sure of the Release number of the Card and Socket Services on your PC, or if such Services are not installed onto your PC, please refer to the "Troubleshooting" section or consult the manufacturer of your PC to get detailed information.

If you use IBM Card and Socket Services

Follow the procedures on page 39 to make necessary modifications to your system before installation.

If you install the software from DOS

The supplied applications for the Windows 3.1 will not be installed.

About the supplied software

The supplied software allows you to do the following:

- Controls playback of audio CDs from your PC.
- View Photo CD images (available if installation is done from Windows 3.1)
- Manage SCSI devices connected to your PC (available if installation is done from Windows 3.1)

For details on the above software, refer to page 29.

Installing under Windows 3.1

- 1** Press ► on the CD-ROM drive to turn the power on.
- 2** Insert the PC card into the PC card slot of your PC.
- 3** Start Windows 3.1, if it is not already running.
Be sure to quit all running applications.
- 4** Insert the supplied floppy disk into the floppy disk drive (drive A) of your PC.
- 5** From the File Menu of either the File Manager or the Program Manager, choose Run. In the Command Line box, type:
`a:setup`
- 6** Press Enter or click [OK].
- 7** Follow the instructions on the screen to complete installation.
- 8** Restart your PC.
Click [Reboot System].
If you clicked [Return to Windows], be sure to quit Windows 3.1, remove the floppy disk, and restart your PC.
If you clicked [View README] and read the README file, your PC returns to Windows 3.1 when you close the README file. In this case, quit Windows 3.1, remove the floppy disk, and restart your PC.

Note

Be sure to restart your PC after completing installation.

For more details on installation, refer to the INSTALL.TXT file in the supplied floppy disk.

Confirming Your PC Card Setting

Before inserting the PC card into your PC, check to see if the PC card device uses 32-bit support. To do so, start Windows 95 and double-click the PC Card (PCMCIA) icon in the Control Panel folder.

If "PC Card (PCMCIA) Property" appears

The PC card device of your PC uses 32-bit support. Close the "PC Card (PCMCIA) Property" window, and proceed with the software installation (next page).

If "Welcome to the PC Card (PCMCIA) Wizard" appears

The PC card device does not use 32-bit support. Proceed as follows to set to 32-bit support.

- 1** In the "Welcome to the PC Card (PCMCIA) Wizard," select "NO," then click [Next>].
- 2** Select "NO," then click [Next>].
- 3** Click [Finish].
You will be required to shut down your PC.
- 4** Click [Yes] to restart your PC.
Now you can proceed with the software installation (next page).

Starting

Be sure to follow the steps below to make connections and to power up the devices. If you do not follow the correct power-on sequence, you cannot control the CD-ROM drive.

For Windows 95 users

- 1** Press ►II on the drive.
The drive is powered up.
Be sure to first power up the drive before proceeding with step 2.
- 2** Make sure the interface cable is connected to the PC card correctly, then insert the PC card into the PC card slot on your PC.
- 3** Power up your PC.
If your PC has already been powered up, you do not have to restart your PC.
You can power up your PC before inserting the PC card.

For Windows 3.1 and DOS users

- 1** Make sure the interface cable is connected to the PC card correctly, then insert the PC card into the PC card slot on your PC.
- 2** Press ►II on the drive to power it up.
You can power up the drive before inserting the PC card.
Be sure to first power up the drive before powering up your PC.
- 3** Power up your PC.
If your PC has already been powered up, restart your PC.

Setting the SCSI ID Number and Termination

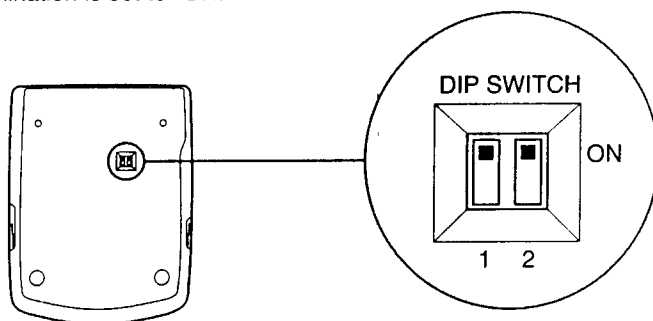
The SCSI ID is a unique number assigned to a SCSI device so that the computer can identify the device.

If necessary, you can change the SCSI ID to "5."

Termination is a physical requirement necessary for electric signals to be transferred correctly on the SCSI bus. Use the CD-ROM drive with the termination set to ON (default setting).

Checking the SCSI ID number and termination

The DIP switches are located on the bottom of the drive. In the default setting, the SCSI ID number is set to "3" and the termination is set to "ON."



DIP switch 1 is for the termination setting

ON : ON (default setting)

OFF : OFF

DIP switch 2 is for SCSI ID number setting

ON : 3 (default setting)

OFF : 5

To change the default setting, use the tip of a ball-point pen or a similar object.

To play an audio CD

Connect the headphones (supplied) to the PHONES jack on the drive.

Insert an audio CD into the drive, then press ►II. Playback of the audio CD begins.

Use an application software to control playback of audio CDs.

To control playback using the buttons on the drive, change the mode of the drive (page 32).

When the alkaline batteries or the rechargeable battery power becomes low

⏻ appears in the display window.

Removing the disc

1 Press the OPEN button to open the disc cover.

The disc stops rotating when you open the disc cover.

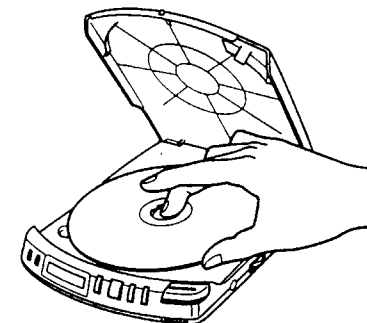
For the Windows 95 users

Do not press ■ (stop/power off) on the drive. The power will be turned off.

If you turn off the power by pressing ■, the Windows 95 will no longer recognize the CD-ROM drive connection. Press ■ only when you want to finish operating CD-ROM discs.

If you press ■ while you still want to operate CD-ROM discs, repeat the starting procedure again.

2 Remove the disc.



Using the rechargeable lithium-ion battery

On a single charge, the drive operates with the rechargeable lithium-ion battery LIP-12(H) (not supplied*) about two hours if used as a CD-ROM drive, or eight hours if used as a CD player. Follow the steps below to install and charge the battery.

* The rechargeable lithium-ion battery is supplied with the models for the countries other than U.S.A.

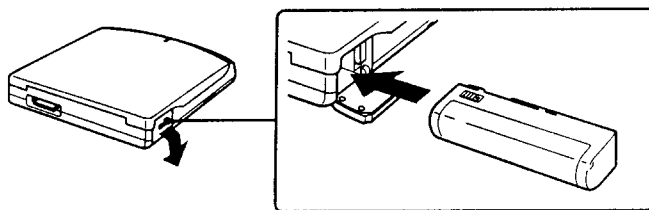
When the rechargeable lithium-ion battery is used, the drive operates at 4x speed.

1 Remove the alkaline battery case, if attached, from the drive.

The battery cannot be charged if the battery case is attached.

2 Open the battery compartment lid.

3 Insert the battery.



4 Replace the lid.

5 Plug the drive into an AC outlet.

"CHG" appears and charging starts automatically. A full charge takes about 3.5 hours. When charging is completed, "CHG" will disappear.

Caution






If you do not use the drive for an extended period of time, remove the rechargeable battery from the drive; otherwise the rechargeable battery may be damaged.

If you are a Windows 3.1 or DOS user, you can enjoy the following features of the supplied software that you have installed onto your PC.

If you installed the software under Windows 3.1

A group icon named Sony CD-ROM Discman is formed under the Program Manager.

Double-click the icon to open the group window, and you will find the following five icons:

Icon name	Function
CD Player 	Play audio CDs. <ul style="list-style-type: none"> • Play, Pause, Stop, Go to Next Track, and Go to Previous Track (activated by clicking on controls with the mouse) • Continuous Play and Shuffle • A program feature that lets you assign titles to CD tracks and arrange titles in a play list • A selectable list of all tracks on the play list that appears when you click in the timer window.
Mini CD Player 	Play audio CDs. The Mini CD Player has the same functions as the CD Player, while the Mini CD Player occupies less space on the screen.
Photo CD Viewer 	View and edit Photo CD images. <ul style="list-style-type: none"> • Display Photo CD images in five resolutions, from thumbnail to full photographic resolution. • Display and transforms Photo CD images in 16 or 256 colors, True Color, or grayscale (depending on type of video card) • Flips, rotates, and crops images • Exports images as TIFF, RIFF, PCX, BMP, and EPS files • Create slide shows of any or all images on a disc, in a specified order or randomly shuffled; slide shows can be controlled by a timer or with the keyboard or mouse. • Support Portfolio discs, which combine still images, high-quality sound, and user-selectable numbered options.
SCSI Interrogator 	<ul style="list-style-type: none"> • Display information about installed SCSI devices.
README 	A text file containing additional information and troubleshooting on using the CD-ROM Discman.

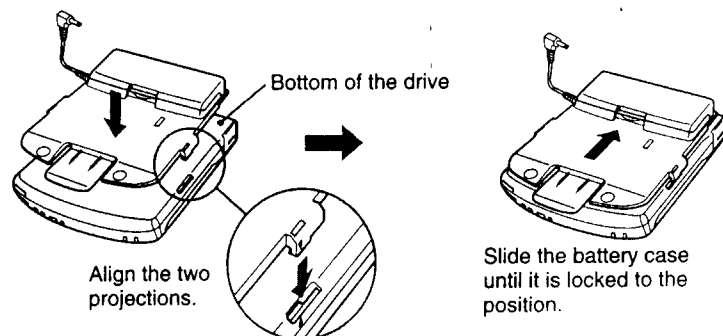
Using alkaline batteries

To use the drive with four size AA (LR6) alkaline batteries (not supplied), attach the supplied battery case to the bottom of the CD-ROM drive.

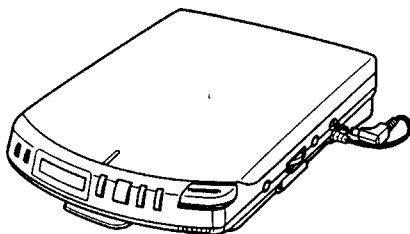
With batteries, the drive will operate for about two hours if the drive is used as a CD-ROM drive, or 12 hours if used as a CD player.

When alkaline batteries are used, the drive operates at 4x speed.

- 1** Attach the battery case to the bottom of the CD-ROM drive.



- 2** Connect the plug of the battery case to the DC IN 6V jack of the drive.



Playing an Audio CD

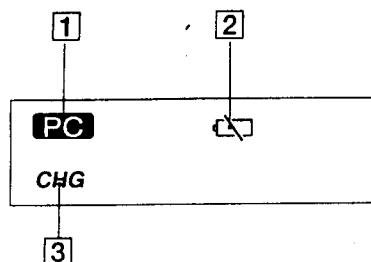
The drive functions just like an audio CD player.

Starting playback

Make sure the drive is connected to a power source.

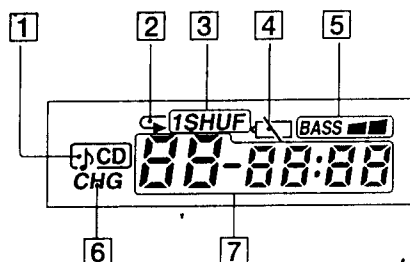
- 1** Insert a CD into the disc compartment.
- 2** Plug the headphones (supplied) into the PHONES jack on the drive.
- 3** Set the volume to the minimum level using the VOL control.
- 4** Press ►II.
When playback starts, adjust the volume with the VOL control.

– CD-ROM mode –



- 1 PC (CD-ROM mode) indicator**
Appears when the drive is in CD-ROM mode.
- 2 (battery) indicator**
Appears when the battery is low.
- 3 CHG (charge) indicator**
Appears when the rechargeable lithium-ion battery (not supplied*) is charging.

– Discman mode –



- 1 CD (Discman mode) indicator**
Appears when the drive is in audio CD Discman mode.
- 2 (repeat) indicator**
Appears when the repeat mode is on.
- 3 1/SHUF (play modes) indicator**
The corresponding indicator appears when an audio CD is inserted.
1 : Play a single selection
SHUF : All selections in random order.
- 4 (battery) indicator**
Appears when the battery is low.
- 5 BASS (bass boost) indicator**
Appears when the bass sound is increased (to two levels).
- 6 CHG (charge) indicator**
Appears when the rechargeable lithium-ion battery (not supplied*) is charging.
- 7 Track indicator**
Indicates track and play times on an audio CD.

To change the playback mode, proceed as follows while playing back a CD.

- 1 Press MODE.**
" CD" indication starts flashing.
While it is flashing (for about 15 seconds), proceed with step 2.
- 2 Press SELECT to choose the desired playback mode.**
Press SELECT repeatedly until the desired playback mode is shown on the display window, and wait for about 15 seconds. The indications stop flashing and stay lit.
If you want to increase the bass sound (see below), press MODE while the indications are flashing.

Increasing the bass sound

You can increase the bass sound to two levels.

- 1 Press MODE.**
" CD" indication starts flashing.
While it is flashing (for about 10 seconds), proceed with step 2.
- 2 Press MODE again.**
" CD" and "BASS" start flashing.
- 3 Press SELECT to choose playback with increased bass sound.**
Each time you press SELECT, the indication changes from "BASS " (higher) to "BASS " (highest), and then back to "BASS" (normal).
When the desired bass sound indication flashes, press MODE (or wait for about 15 seconds). The indicators stop flashing and stay lit.

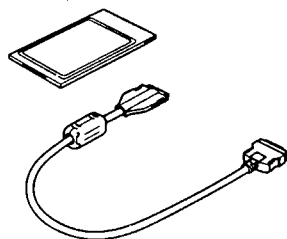
Note

To output the original sound, select "BASS" (normal).

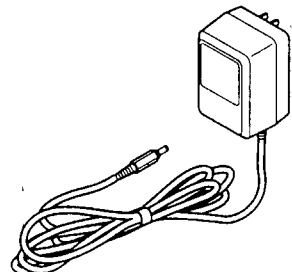
* supplied with the models for the countries other than U.S.A.

Checking the Package Contents

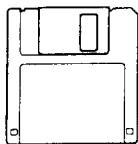
Make sure the following items are included in the package. If anything is missing, contact your local Sony dealer.



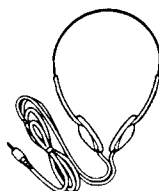
Interface cable and
SCSI PC card



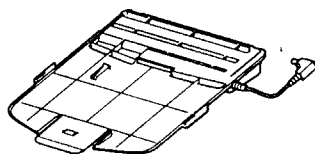
AC power adaptor
(AC-C610NA)



3.5 inch floppy disks
(3pcs. for European countries
1pc. for other countries)



Stereo headphones



Manual package

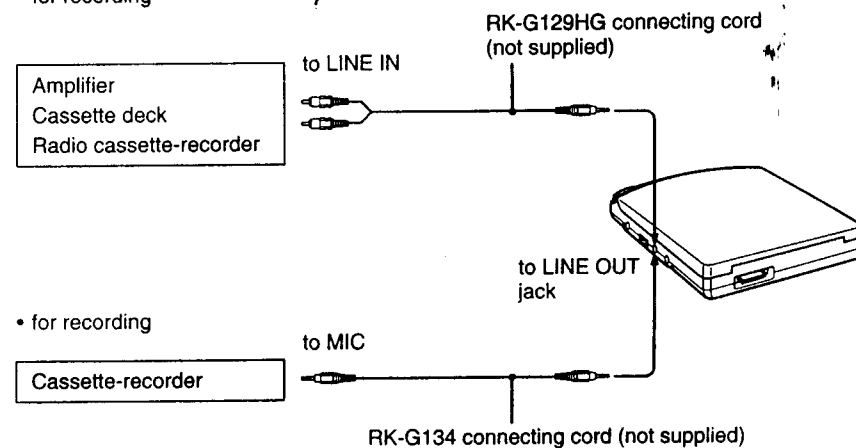
Manual package

The rechargeable lithium-ion battery is supplied with the models for the countries other than U.S.A.

Alkaline battery case
(EBP-RD1)

Connecting Other Audio Equipment

- for monitoring the sound through speakers
- for recording



Notes on the connection

- Turn off the equipment before connecting it to the unit.
- If the RK-G129HG connecting cord (not supplied) is used, be sure to insert the white plug into the L (left channel) jack on the equipment, and the red plug into the R (right channel) jack.
- Do not connect to the PHONO jacks on an amplifier.
- Make sure the plugs are securely inserted into the jacks. A loose connection may cause a humming noise.
- If the unit causes interference to radio or television reception, turn off the unit and move it away from the receiver.

On headphones

Road safety

Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in some areas. It can also be potentially dangerous to play your headphones at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situation.

Preventing hearing damage

Avoid using headphones at high volume.

Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce volume or discontinue use.

Caring for others

Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate to the people around you.

On handling a disc

- Always hold a disc by its edge. Do not touch the surface (the side without a label.)
- Do not stick paper or write anything on the surface of the disc.

Yes



No



On safety

- Do not put any objects in the safety slot inside the disc compartment. If you do so, the laser beam may come out when the lid is opened.
- Should any solid objects or liquid fall into the unit, unplug it and have it checked by qualified personnel before operating it any further.
- Do not put any foreign objects in the DC IN 6V (external power input) jack.

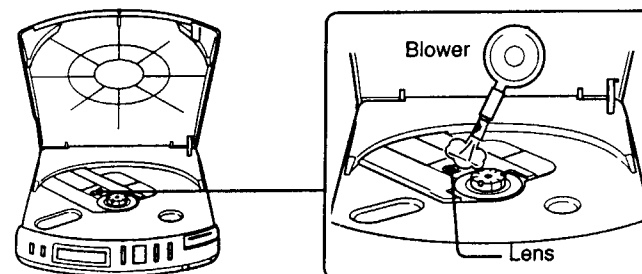
Maintenance

Cleaning the casing

Clean the casing with a soft cloth slightly moistened with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine as they may damage the finish of the casing.

Cleaning the lens

If you accidentally touch the lens with dirty fingers or if dust on the lens prevents the unit from operating properly, open the disc cover and clean the lens with the lens cleaning kit (not supplied).



Cleaning the headphones plug

Keep the headphones plug clean to obtain optimum sound. Wipe the plug with a dry, soft cloth.

Cleaning a disc

- If a disc becomes dirty, clean it with a cleaning kit. Wipe the disc from the center out.
- Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray intended for use with records. They may damage the disc.

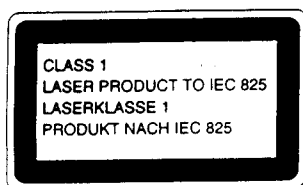


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Problem	Cause/Solution
SCSI host adapter was not detected during installation (For Windows 3.1/DOS users)	<ul style="list-style-type: none"> Card and Socket Services are not installed on your PC. <ul style="list-style-type: none"> → Consult your PC manufacturer and install Card and Socket Services Release 2.1 or higher. IBM Card and Socket Services are installed on your PC. <ul style="list-style-type: none"> → Follow the procedures below to modify your system. <ol style="list-style-type: none"> 1 Run a text editor and open "AUTODRV.INI" file located in the directory where Card and Socket Services are installed. 2 Look for [SCSI] section and add following line: [SCSI] CardID=SCSI Option=Ignore ← add this line 3 Save the modification and restart your PC, then proceed with installation again.
The functions of the supplied software cannot be used.	<ul style="list-style-type: none"> You have installed the software under DOS. Re-install the software under Windows 3.1 (page 23).
The Windows CD player does not function. (For Windows 3.1 users)	<ul style="list-style-type: none"> The [MCI] CD audio driver is not selected. Start the Windows control panel and double-click [Drivers]. Click [Add (A)...], select the [MCI] CD audio driver from the driver list, and close the window.

For the customers in the United Kingdom



This CD-ROM drive unit is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the bottom.

For the customers in Canada

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For the customers in Australia

If the supply cord of AC power adaptor is damaged, the AC power adaptor must be returned to the manufacturer or his agent for the cord to be replaced.

NOTICE TO USERS

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The software described herein may also be governed by the terms of a separate user license agreement.

Specifications

Disc

Disc

Acceptable discs	Photo CD (single or multisession) discs CD-ROM mode-1 data discs CD-ROM mode-2 form 1, form 2 data discs CD-Audio discs Video CD CD Extra (CD+)
Disc diameter	12 cm, 8 cm

Rotational speed (varies from disc to disc)

Normal speed	200 rpm to 530 rpm
4x speed	800 rpm to 2120 rpm
6x speed	1200 rpm to 3180 rpm

Drive Performance

Data transfer rate

Sustained rate	600 Kbytes/s (4x speed) 900 Kbytes/s (6x speed)
Burst rate	5.0 Mbytes/s

Access time

Full stroke	750 ms
Average (1/3 STROKE)	280 ms

Reliability

Read error rate (includes 5 retries)

L-EC on	1 block/10 ¹² bits (typical)
L-EC off	1 block/10 ⁹ bits (typical)

Audio

Output level (at 6 V input level)

Line output	0.78 V at 47 Kohm
Headphone output	12 mW + 12 mW at 16 ohm

Owner's Record

The model number and the serial number are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. PRD-650WN

Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

CAUTION

As the laser beam used in this CD-ROM drive unit is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This shielded interface cable (audio cable) recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to subpart B of Part 15 of FCC.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

PCMCIA Card Specifications

Dimensions	85.6 x 54.0 x 5.0 mm (w/h/d) (3 ³ / ₈ x 2 ¹ / ₄ x 7/ ₃₂ inches)
Mass	24.0 g (1 oz)
Operating temperature	5 °C to 35 °C (41 °F to 95 °F)
Operating humidity	10 % to 90 %
Required voltage	5 V ± 0.5 V
DC current required	10 mA

Accessories not supplied

Rechargeable lithium-ion battery LIP-12(H)*
Connecting cord RK-G129HG
Connecting cord RK-G134
Car connecting pack CPA-9
Car battery cord DCC-E260
Car mount plate CPM-300P
Active speaker system SRS-PC21, SRS-PC41

* The rechargeable lithium-ion battery is supplied with the models for the countries other than U.S.A.

Your dealer may not handle some of the above listed accessories. Consult the dealer for detailed information about the accessories in your country.